

CLAIMS

1. A composition comprising zinc and bismuth for use in the protection of glassware in
5 an automatic dishwashing process from detrimental effects caused by exposure of the
glassware to aluminium.

2. A composition according to claim 1, wherein the ratio of zinc to bismuth in the
composition is from 1:100 to 100:1 (based on mass of the metals).

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3. A composition according to claim 2, wherein the ratio of zinc to bismuth in the
composition (by mass) is from 1:10 to 10:1, more preferably from 1:5 to 5:1 and most
preferably about 1:1.

15 4. A composition according to claim 1,2 or 3, wherein the zinc and / or bismuth are in
metallic form.

5. A composition according to claim 4, wherein the metallic form is an alloy of zinc and
bismuth.

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6. A composition according to claim 1,2 or 3, wherein the zinc and / or bismuth are
present as a salt or compound.

7. A composition according to claim 6, wherein the salt and/or compound is a nitrate,
25 oxide, sulphate, phosphate, halide, carbonate or carboxylate salt.

8. A composition according to any one of claims 1 to 7, wherein the composition
comprises a detergent formulation.

9. A composition according to claim 8, wherein the bismuth and zinc comprise from 0.002wt% to 6wt% (based on the weight of both metals) of the detergent formulation.

10. A composition according to claim 9, wherein the bismuth and zinc comprise from 0.01 to 3wt% and most preferably from 0.02 to 1.3wt% (e.g. 0.4wt%) of the detergent formulation.

11. A composition according to any one of claims 1 to 7, wherein the composition comprises a rinse aid formulation.

12. A composition according to claim 11, wherein the bismuth and zinc comprise from 0.03wt% to 30wt%, more preferable 0.15 to 15 % and most preferable 0.3 to 7 % (based on the weight of both metals) of the rinse aid formulation

13. A composition according to any one of claims 1 to 7, wherein the composition comprises a soluble ceramic and/or glass formulation.

14. The use of a composition comprising zinc and bismuth for the protection of glassware in an automatic dishwashing process from detrimental effects caused by exposure of the glassware to aluminium.

15. The use according to claim 14, wherein the amount of zinc and bismuth provided to a dishwasher cycle is from 1 to 1000mg.

16. The use according to claim 15, wherein the amount of zinc and bismuth provided to a dishwasher cycle is from 5 to 500mg.

17. The use according to claim 16, wherein 5 to 100 mg zinc and 5 to 100 mg bismuth is provided to a dishwasher cycle.

18. A composition comprising zinc, bismuth and aluminium for use in the prevention of glassware corrosion in an automatic dishwasher.
19. A composition containing zinc, bismuth and silicate for use in the prevention of
5 aluminium corrosion in an automatic dishwasher.
20. A composition containing zinc, bismuth and silicate for use in the prevention of aluminium corrosion and glassware corrosion in an automatic dishwasher.